



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/802,135

03/15/2004

Permachanahalli S. Ramkummar

42P17109

3427

8791

7590

09/12/2007

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER

HAN, QI

ART UNIT

PAPER NUMBER

2626

MAIL DATE

DELIVERY MODE

09/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,135	Applicant(s) RAMKUMMAR ET AL.	
	Examiner Qi Han	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/15/04 & 7/1/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the Information Disclosure Statement submitted on 03/15/2004 and 07/01/2005 have been considered by the examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (see the specification: pages 1-10 and Figs. 1-2, which is also referred to or based on the IDS: "ITU-T Recommendation G.729" and "G.729 Annex B", 1996) hereinafter referenced as ADMISSION in view of CHANG et al. (US 6,22,607 B1) hereinafter referenced CHANG.

As per **claim 13**, ADMISSION discloses "ITU-T G.729" and 'G.729 Annex B') for coding of speech using CS-ACELP and using silence compression scheme (specification: p5-p6), comprising:

"an encoder (Fig. 1, 100) coupled to a communication channel (Fig. 1, 105) wherein the encoder is configured to compute a current excitation based on one of a plurality of random excitations for a non active voice frame and to [re-use the random excitations to] compute the current excitations for other non active voice frames" (Fig. 2, 102-108);

“a voice activity detector coupled to the encoder to detect for a non active voice signal” (Fig. 1, 104);

“a decoder (Fig.1, 106) coupled to the communication channel, the decoder further comprising a comfort noise generator to generate comfort noise if the voice activity detector detects the non active voice signal” (p22-p23).

Even though, ADMISSION disclose to ‘generate Gaussian excitation (samples) for every subframe’ for computing the current excitation (Fig. 2, 204), ADMISSION does not disclose “re-use the random excitation” for computing the current excitation. However, the feature is well known in the art as evidenced by CHANG who discloses ‘method and apparatus for eighth rate random number generation for speech coders’ (title), comprising different types of ‘speech coder’/ ‘vocoder’ including CELP (col. 4, lines 57-65); using LUT (lookup table) implemented with ROM/ other storage medium for ‘Gaussian random variable’ (samples) ‘generated to encode the silence frame’ (col. 6, lines 1-10); and ‘Gaussian random numbers (samples) are calculated in advance ... and stored in the LUT (col. 7, 1-10), which is necessarily reused for later processing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the features of the generation of Gaussian excitation (samples) disclosed by ADMISSION with LUT storing Gaussian random numbers calculated in advance for the Gaussian exaltation (samples) taught by CHANG, for the purpose (motivation) of reducing memory needs and/or computational requirements for encoding nonspeech or silence signal (CHANG: col. 2, lines 9-31).

As per **claim 14** (depending on claim 13), ADMISSION in view of ADMISSION further discloses “the comfort noise generator further configured to pad the current excitation with zeros if a gain of the non active voice frame is zero” (Fig. 2, 202).

As per **claim 15** (depending on claim 14), ADMISSION in view of ADMISSION further discloses “the comfort noise generator further configured to generate random adaptive codebook parameters and fixed codebook parameters” (Fig. 2, 203).

As per **claim 16** (depending on claim 15), ADMISSION in view of ADMISSION further discloses:

“to generate a random adaptive excitation based on the random adaptive codebook parameters” (Fig. 2, 205);

“to compute a sum of the random adaptive excitation and one of the random excitations” (Fig. 2, 206); and

“to rescale the current excitation with the sum of the random adaptive excitation and one of the random excitations” (Fig. 2, 206).

As per **claim 17** (depending on claim 16), ADMISSION in view of ADMISSION further discloses:

“to compute a fixed codebook gain based on the fixed codebook parameters” (Fig. 2, 207);

“to update the current excitation with an algebraic-code-excited linear-prediction excitation” (Fig. 2, 208); and

“to loop for the other non active voice frames” (Fig. 2, 209).

As per **claims 18-19** (depending on claim 13), **ADMISSION** in view of **ADMISSION** further discloses “the random excitations are based on a plurality of random noise samples” (claim 18) and “the random noise samples are Gaussian noise samples” (claim 19), (Fig. 2, 204 and p23).

As per **claims 1-6**, they recite a method. The rejection is based on the same reason described for apparatus claims 13-17 and 19 respectively, because claims recite the same or similar limitation(s) as claims 13-17 and 19 respectively.

As per **claims 7-12**, they recite storage medium. The rejection is based on the same reason described for apparatus claims 13-17 and 19 respectively, because claims recite the same or similar limitation(s) as claims 13-17 and 19 respectively.

As per **claims 20-26**, they recite storage medium. The rejection is based on the same reason described for apparatus claims 13-19 respectively, because claims recite the same or similar limitation(s) as claims 13-19 respectively.

As per **claims 27-33**, they recite a method. The rejection is based on the same reason described for apparatus claims 13-19 respectively, because claims recite the same or similar limitation(s) as claims 13-19 respectively.

As per **claims 27-33**, they recite an apparatus. The rejection is based on the same reason described for claims 13-19 respectively, because claims recite the same or similar limitation(s) as claims 13-19 respectively.

Conclusion

3. Please address mail to be delivered by the United States Postal Service (USPS) as follows:

Art Unit: 2626

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450.

or faxed to: 571-273-8300, (for formal communications intended for entry)

Or: 571-273-8300, (for informal or draft communications, and please label "PROPOSED" or "DRAFT")

If no Mail Stop is indicated below, the line beginning Mail Stop should be omitted from the address.

Effective January 14, 2005, except correspondence for Maintenance Fee payments, Deposit Account Replenishments (see 1.25(c)(4)), and Licensing and Review (see 37 CFR 5.1(c) and 5.2(c)), please address correspondence to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolator, etc.) as follows:

U.S. Patent and Trademark Office
Customer Window, Mail Stop _____
Randolph Building
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh
August 7, 2007


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER